

## REMARKS

The last Office Action of June 5, 2003 has been carefully considered. Reconsideration of the instant application in view of the foregoing amendments and the following remarks is respectfully requested.

Claims 1-38 are pending in the application. Claims 3-5, 7-8, 11, 14, 17-21, 23-34, 27, 32, 35 and 38 are withdrawn from consideration. Claims 1, 16 and 33 have been amended. No claims have been canceled or added. No fee is due.

Claims 1-2, 6, 9-10, 12-13, 15-17, 22-23, 25-26, 28-37 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. No. 5,525,854 to Hall et al.

### REJECTION UNDER 35 U.S.C. §102(b)

The rejection under 35 U.S.C. 102(b) is respectfully traversed.

The present invention, as set forth in independent claims 1, 16 and 33, is generally directed to an electric machine, and in particular to a rotor which is part of an electric machine and includes a web structure to realize an inertial mass relief. As noted in paragraph [0009] of the instant specification, the present invention resolves prior art shortcomings, relating to increase in moment of inertia, by providing an inertial mass relief through arrangement of a web structure, i.e. a structure with a plurality of relief zones, extending inwardly from the torque receiving structure to the shaft and effecting an inertial mass relief of

the rotor. To impart a torque on the rotor, an excitation structure is provided, which may be a permanent magnet or an electric conductor.

Hall describes a system for measuring the velocity of ultrasonic signals in the plane of a moving web (24) and includes a plurality of ultrasonic transducers (22) disposed adjacent the moving web (24). The transducers (22) are carried by a rotating cylinder (26), disposed to be in contact with one side of the moving web. The ends of the cylinder are closed with caps (98) which are formed with a plurality of spokes (109) joined together at an integrally formed central hub (109) which includes a keyway (114). As stated in col. 8, lines 28 to 30, the keyway (114) is provided *"to enable the cylinder 26 to be connected to a drive system"*. Apart from the fact that Hall is not involved with the construction of an electric motor, the keyway (114) is not capable to effect an excitation of an electric machine.

In order to clearly distinguish the present invention from Hall, applicant has amended claims 1, 16 and 33 by expressly setting forth the laminated configuration of the rotor. Support therefore can be found throughout the specification, e.g. paragraphs [0011] or [0043]. The laminated configuration of the rotor prevents the formation of eddy currents. The use of a cylinder according to Hall as rotor of an electric machine would result in the formation of eddy currents that would make the operation of the electric machine impossible.

For the reasons set forth above, it is applicant's contention that Hall neither teaches nor suggests the features of the present invention, as recited in claims 1, 16 and 33.

As for the rejection of the retained dependent claims, these claims depend on claims 1, 16 and 33, respectively, share their presumably allowable features, and therefore it is respectfully submitted that these claims should also be allowed.

Withdrawal of the rejection of claims 1-2, 6, 9-10, 12-13, 15-17, 22-23, 25-26, 28-37 under 35 U.S.C. §102(b) and allowance thereof are respectfully requested.

### CONCLUSION

Applicant believes that when the Examiner reconsiders the claims in the light of the above comments, he will agree that the invention is in no way properly met or anticipated or even suggested by the prior art of record, however it is considered.

In view of the above presented remarks and amendments, it is respectfully submitted that all claims on file should be considered patentably differentiated over the art and should be allowed.

Reconsideration and allowance of the present application are respectfully requested.

Should the Examiner consider necessary or desirable any formal changes anywhere in the specification, claims and/or drawing, then it is respectfully requested that such changes be made by Examiner's Amendment, if the Examiner feels this would facilitate passage of the case to issuance. If the

Examiner feels that it might be helpful in advancing this case by calling the undersigned, applicant would greatly appreciate such a telephone interview.

Respectfully submitted,

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**AMENDMENTS TO THE CLAIMS WITH MARKINGS TO SHOW CHANGES  
MADE, AND LISTING OF ALL CLAIMS WITH PROPER INDENTIFIERS**

1. (Currently amended) An electric machine, comprising:  
a shaft;  
a rotor having a laminated configuration;  
means for excitation of at least portions of the rotor;  
means for torque pickup upon the rotor;  
means for force transfer between the rotor and the shaft; and  
a web structure between the means for torque pickup and the means for  
force transfer while effecting an inertial mass relief of the rotor.
2. (Original) The electric machine of claim 1, wherein the web structure has at  
least one web configured as secant.

Claims 3-5 (Withdrawn)

6. (Original) The electric machine of claim 1 in the form of a permanently  
excited synchronous machine.

Claims 7-8 (Withdrawn).

9. (Original) The electric machine of claim 1, wherein the means for force transfer between the rotor and the shaft includes at least one connection selected from the group consisting of positive engagement, non-positive engagement, and material-based joint.
10. (Original) The electric machine of claim 1, wherein the web structure is configured to have a honeycomb pattern.

Claim 11 (Withdrawn)

12. (Original) The electric machine of claim 10, wherein the honeycomb pattern of the web structure is made rigid.
13. (Original) The electric machine of claim 10, wherein the honeycomb pattern of the web structure is made flexible.

Claim 14 (Withdrawn)

15. (Original) The electric machine of claim 1, wherein the rotor is made of at least two materials.

16. (Currently amended) An electric machine, comprising:
- a rotor having a laminated configuration;
  - a shaft centered interiorly of the rotor;
  - an excitation structure for generating a torque;
  - a torque receiving structure for picking up the torque from the excitation structure and imparting the torque onto the rotor; and
  - a connection structure for providing a fixed rotative engagement between the rotor and the shaft;
- wherein the rotor includes a web structure extending inwardly from the torque receiving structure to the shaft and effecting an inertial mass relief of the rotor.

Claims 17-21 (Withdrawn)

22. (Original) The electric machine of claim 16, wherein the connection structure includes at least one connection selected from the group consisting of positive engagement, non-positive engagement, and material-based joint.

Claims 23-24 (Withdrawn)

25. (Original) The electric machine of claim 23, wherein the honeycomb pattern of the web structure is made rigid.
26. (Original) The electric machine of claim 23, wherein the honeycomb pattern of the web structure is made flexible.

Claim 27 (Withdrawn)

28. (Original) The electric machine of claim 16, wherein the rotor is made of at least two materials.

29. (Original) The electric machine of claim 16, wherein the web structure includes a polygonal ring embracing the shaft and a plurality of webs extending between the torque receiving structure and the polygonal ring.

30. (Original) The electric machine of claim 22, wherein the positive engagement includes a fitting key assembly, including a key received in aligned grooves of the web structure and the shaft.

31. (Original) The electric machine of claim 22, wherein the non-positive engagement includes shrinking of the rotor onto the shaft.

Claim 32 (Withdrawn)

33. (Original) A rotor adapted for use in an electric machine, comprising:  
a body portion having a laminated core structure and including an outer annulus and a web structure configured to effect an inertial mass relief of the main body, wherein the web structure extends inwardly from the annulus and forms a bore for receiving a shaft; and  
an excitation structure operatively connected to the annulus for imparting a torque on the body portion.



34. (Original) The rotor of claim 33, wherein the web structure includes a plurality of webs so crisscrossing the body portion as to define a plurality of relief zones.

Claim 35 (Withdrawn)

36. (Original) The rotor of claim 33, wherein the excitation structure includes an element connected to the annulus and selected from the group consisting of permanent magnet and an electric conductor.

37. (Original) The rotor of claim 34, wherein the webs exhibit a honeycomb pattern.

Claim 38 (Withdrawn)